

REQUEST THAT THE INTERNATIONAL COMMISSION RULE TO  
SUSPEND FOWLER'S LECTOTYPE DESIGNATIONS OF NORTH  
AMERICAN FRESHWATER FISHES. Z.N.(S.) 1970

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Among the numerous publications by Henry W. Fowler during the early part of this century were three (1909, *Proc. Acad. Nat. Sci. Philad.* [1908] 60 : 517-553; 1910, *Proc. Acad. Nat. Sci. Philad.*, 62 : 273-293, pls. 15-21; 1918, *Occ. Pap. Mus. Zool. Univ. Michigan*, 60 : 1-51, pls 1-13) dealing in part with type material of eastern North American freshwater fishes housed at the Academy of Natural Sciences of Philadelphia. In these papers Fowler made what may be interpreted as lectotype designations for many of the species described by Edward D. Cope 40 to 50 years earlier, a fact that has generally been overlooked in the past (Gilbert, 1964, *Bull. Florida St. Mus., Biol. Sci.*, 8 [2] : 95-194). This was done by indicating "cotype (type)" for the specimen in question, together with catalogue numbers for this and the remaining specimens in the series, type locality, and an indication of specimen size (expressed in total length); in the 1910 paper this was accompanied by illustrations of types for most (but not all) of Cope's species now referred to the cyprinid genus *Notropis*, and in the 1918 paper appeared illustrations of types belonging to several different families. It is important to note that only Cope's species were so treated, the ANSP type material of other species being listed as "cotypes", except in the few cases where a holotype had been specifically designated in the original description. Inasmuch as Fowler differentiated between "types" and "cotypes", it would seem that lectotype designations were intended for most of Cope's species. Even if this were not his intention the requirements for such designations are met, and the lectotype specimens are those on which the illustrations in the 1910 and 1918 papers are based, according to Article 74(b) of the International Code of Zoological Nomenclature (also see Blackwelder, 1967, *Taxonomy; a text and reference book*, p. 594).

2. It is not always possible to determine which cotype (=syntype) Fowler was selecting and/or illustrating, inasmuch as he never segregated the specimen in question from others in the type jar. However, since Fowler usually picked the largest individual in a series for illustration, assuming a comparable state of preservation (J. E. Böhlke, *pers. comm.*), and always included an inch scale line with each drawing, one can determine with reasonable accuracy the length of each specimen depicted in his 1910 paper. (I have not attempted to do this for those species appearing in his 1918 paper.) Of the 27 species of *Notropis* for which lectotypes were designated, for only 14 is it possible to determine with certainty which specimen was illustrated. Of these, three (*Hybopsis fretensis*, *Cliola montiregis*, and *Photogenis arionimus*) are based on uniques, and for the other 11 (*Moniana jugalis*, *Hybopsis phaenna*, *Hybopsis chiliticus*, *Hybopsis rubricroceus*, *Hybopsis chlorocephalus*, *Photogenis leuciodus*, *Hypsilepis cornutus cyaneus*, *Hypsilepis cornutus cerasinus*, *Hypsilepis ardens*, *Alburnellus micro-*

*pteryx*, and *Alburnops plumbeolus*) one specimen is substantially larger than the others, is close to the calculated length of the illustrated type, and/or has some other outstanding identifying characteristic.

3. As a result of the present study it has been found that two of Fowler's lectotypes represent species different from those now recognized. *Alburnops plumbeolus* is presently regarded as a synonym of *Notropis chrysocephalus*, and a lectotype was designated by me (Gilbert, 1964, *op. cit.*: 160) since two species (*N. chrysocephalus* and *N. heterodon*) were present among the seven syntypes. The specimen illustrated by Fowler (1910, *op. cit.*: fig. 30), however, is *N. heterodon*, the only representative of this species in the syntypic series. More critical is the situation involving the types of *Hypsilepis cornutus cerasinus*, since the names of two valid species of *Notropis* are affected. The original syntypic series consisted of 34 *N. albeolus* and only nine *N. cerasinus*, although it is clear from the original description (Cope, 1868, *Proc. Acad. Nat. Sci. Phila.* [1867], 19: 159) that the latter species was the one for which the description was intended; for this reason, I (Gilbert, 1964, *op. cit.*: 137) designated one of the nine specimens of *N. cerasinus* as lectotype. Fowler's (1910, *op. cit.*: fig. 31) illustration of "*H.c. cerasinus*" is based on a specimen calculated to be 99 mm standard length, which is substantially greater than the largest recorded individual of *N. cerasinus* (87.5 mm SL), but within the range of *N. albeolus*. One of the *N. albeolus* syntypes of *H.c. cerasinus* is 97.5 mm SL, and this is obviously the specimen on which Fowler's drawing was based. Thus, if Fowler's lectotypes are recognized it would result in (1) the species name *cerasinus* Cope, 1868, being substituted for *albeolus* Jordan, 1889, and (2) a new name being erected for the species presently called *N. cerasinus*. Obviously such changes are undesirable and not in the best interests of ichthyology.

4. In addition to the unfortunate and undesirable changes in species names that would result from acceptance of Fowler's lectotype designations, the following points should be considered:

- (1) It is not completely certain that Fowler actually intended to designate lectotypes in the above papers since:
  - (a) he never segregated nor otherwise identified the specimens so designated and/or illustrated;
  - (b) he did not designate lectotypes for all of Cope's species for which syntypes existed and which were treated in the above papers;
  - (c) he was not consistent in his usage of terms in his 1910 and 1918 papers, sometimes calling the same specimen "type" in the text and "cotype" in the illustration, or vice versa;
  - (d) the practice of designating lectotypes was not common at the time Fowler's papers were written.
- (2) One cannot identify with certainty 13 of the 27 types illustrated in his 1910 paper (see 1a above).
- (3) In one instance (i.e., *Squalius photogenis*) the illustration appearing in his 1910 paper could not possibly have been based on either of the two specimens now present in the type jar (see Gilbert, 1971, *Copeia* [3]: in press), thus raising the possibility that other illustrations may not have been based on type material.

5. For the above reasons the Commission is therefore requested to use its plenary powers to suppress Fowler's lectotype designations appearing in his 1909, 1910, and 1918 papers cited above.